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THE WILSON QUARTERLY.

VOL. 4. JULY, 1892. No. 2.

COLLECTING IN THE GILA VALLEY.

BY F. T. PEMBER.

(Continued from page 6.)

Looking toward the cloudless sky we see several Turkey Vultures and large hawks floating lazily over its valley, while other hawks may be seen sitting upon dead trees and stubs. I either shot or saw closely Western Red-tail, Mexican Goshawk, Ferruginous Rough-leg, Swainsons, Sparrow and Sharp-shinned hawks, also White-tailed Kite. Have also seen Barn, Long-eared, Short-eared, and Pigmy Owls. On my last visit I felt anxious to secure as many specimens as possible of Leconte's Thrasher, but one seldom gets them even when seen, for they are very wild and on the ground run very fast, acting and looking, if only the back is seen. like the Sage Thrasher.

After several ineffectual long shots one day, I was returning, hot, dusty, and tired to the so-called hotel, by the shortest route across the desert; it was some time past sundown, and the place was two miles from the river bottom in a very open part of the desert and where I little expected to see a bird of any kind; but I did see one, runnning from one greasewood bush to another as lively as a quail, and a quick shot at long range, in the dusky twilight, proved effective. I did not then know what it was, and on going to it was de-

lighted and surprised to find a fine Leconte's Thrasher. I thought it strange that it should be found in such a locality. The next day I was out looking for more in the same place, as near as I could locate it, but I searched unsuccessfully for a long time. Gradually I worked my way nearer the bottom lands, and when almost on their border, though still in the desert, and where the ground was broken into low ridges, I saw plenty of this rare species. There must have been fully fifty, in a scattering flock, as we often see robins in September. My hopes were high now and I thought to get a dozen or more. But the birds were very wary, and ran from bush to bush, or took short flights, always designing to keep well out of gun shot range. At times as they ran under a low bush, I could have killed five or six at a shot had I only been nearer by one half the distance. I followed them about persistently as long as I could find one to follow, taking very long shots from time to time, and succeeded in getting just four out of the whole lot, by shooting ten or twelve times. Where they went to I never knew, as they seemed to scatter out in all directions, and I did not see another that day. I cannot understand why these birds should be so shy in such a country. Not so with the woodpeckers, however, for the Indians prize their feathers very highly, and have hunted them so persistently, particularly the Gilded Flickers, which are plenty here, that many of them will leave the cactus in which they live before you get within 200 yards of them.

I fear this article is getting too long, and will give some incidents of one day's shooting, and close.

On the morning of April 16th, 1892, I started early, with horse, wagon and driver, also plenty of water, hatchet, rope, etc., for a day's collecting across the desert, to the west of Gila Bend. No birds at first, but after a drive of a mile or more I saw a small bird drop over a little ridge of lava. Leaving the wagon, I went to the point where I saw it last. It had vanished, but in its place I flushed a fine pair of Texan Night-hawks, both of which I secured. I have taken a dozen or more about here, and all agree with each other and

with those taken further west, except one pair, which are very much paler than the others and may prove a new subspecies. These birds are found on the sand or on the bare volcanic rocks which are so hot it is difficult to hold the hand on them. And just now we see the absurdity of naming a new bird for a state or locality, for the Texan Nighthawk is the common and only Night-hawk of Arizona and California, while the Night-hawk *C. Virginianus* is the common and only Night-hawk over a large portion of Texas. Further on we cross an *arroyo* with high banks and see a number of swallows flying about them. We stop long enough to get three. They are of the Rough-winged species. Driving for some cactus we see several Gila Woodpeckers and Gilded Flickers leave them. Hiding behind a bush, as best I can, I await their return, and after waiting half an hour shoot one of the former, but the last named have been too well schooled to be caught in that way. While watching for them I saw a pair of Cactus Wrens feeding their young in the fork of a cactus, and fully 25 feet high. One of the old birds came with food every two or three minutes. I have found nests of this species almost by the hundred in some places, and except in one instance, all were in low branching cactus from three to five feet high. The exception was twelve feet high in an elder tree. But the cactus they love so well does not grow in this part of Arizona, and this nesting site only offers another instance of birds changing their habits to correspond with their surroundings. These were the only wrens of any kind that I saw. I now spend an hour or more for eggs and succeed in getting a fine set of Gilded Flicker and two sets of Gila Woodpeckers. For a long time I was puzzled how to get eggs from the cactus, as it needs a ladder twenty or thirty feet long; but I solved it at last and can climb any of them with the aid of a hatchet, though a rope is of great assistance. It is slow work at best, as many of the spines must be trimmed off, and notches cut in the trunk for hands and feet. A rope around the cactus and your own body gives you a better chance to work. In this case I made use of the wagon to give me a

start and then see how few spines I can take off and make the ascent. Found I could get over and around many of them, but several times before I got down again I wished I had taken off just a few more. While cutting into a woodpecker's hole a Pigmy Owl flew from a hole higher up; so I had to go to that, but found nothing for my trouble. Working nearer the river, among the mesquite trees, I get a few quail and shoot a Chaparral Cock from the wagon, with dust shot. I next took a rather long shot at a Ferruginous Roughleg. Two or three feathers floated out in the air in one direction and the balance went off in a body in another. A Crissal Thrasher soon tried to fly across the road in front of us. A shot filled the air with feathers; but the bird kept on, finally falling in some bushes eighty yards away, where we found him after a long search.

Then I saw several Abert's Towhees and got two of them. My next find was not in the line of ornithology, but was what is called a Gila Monster—one of the largest of American lizards, though perhaps not large enough for the name. It is also known as Gila Horror, and the name "fits them like a glove." They are eighteen to twenty inches long, stocky, thick-set, heavy built fellows, beautifully colored in black and orange, and are as venomous* as rattlesnakes, and twice as ugly. They usually run away if they can, but stop them and tantalize them a little and they act like an enraged cat. Push a stick towards them and they will bite it fiercely, and after getting their teeth well into it, will "roll over" like a trained dog, so as to make the teeth tear and lacerate the wound. I tried "dust" on this one at twenty feet, but he wore a coat of mail, and it only stunned him. I supposed he was dead, and came near being bitten, as I went to pick him up by the tail. At the first touch he "changed ends" so quick I could scarcely see the motion, and it was no part of a second till the end of his nose was just where the tip of the tail had been. I had him repeat the performance several times, but with more caution. I skinned him that evening, and found it the slowest job of the kind I ever did, for the strong, wiry

*It has been discovered recently that the Gila Monster has no poison fangs.—Pub.

muscles of the flesh seemed to be fairly woven into the skin, so that it must be cut away very carefully at every point.

The best find of the day was the nest of the Mexican Goshawk. It was some 25 feet high in an old thick-branched mesquite. I shot the female as she left the nest which was another very rare specimen, and then tried to persuade my driver to go up to the nest; but he wasn't a climber, and "couldn't see it" in the light I did, so had to do it myself. These trees have very stiff, wiry branches, covered with thorns, and the job I had getting to that nest I do not like to repeat often, though I would go through almost anything for another set of as rare eggs. The nest held three eggs entirely fresh, and about the size of those of the Broad-winged Hawk. They are white, slightly nest stained, and are obscurely marked with reddish-brown.

We took our lunch on the river bank under some large cotton woods, stopping at times for a shot at a warbler, to listen to some distant bird note, or to watch some of the water birds along the river. I saw American Egret and a flock of White-faced Glossy Ibis, but too far away to shoot.

At length we turn our faces once more toward Gila Bend, shooting and hunting eggs on the way; but as it would be too much of a repetition to describe it, I will relate but one more incident of the day. We were well on our way back, and I was following up an *arroyo*, with a surface of broken lava, and a growth of low trees and bushes with an occasional cactus, from which the woodpeckers would fly at my approach. My driver was following along the ridge outside so as to keep me in sight. Was having poor success with birds, when all at once came the sharp, buzzing alarm, or challenge of a monster rattlesnake. His head was towards me, raised a foot high, and he showed no disposition to try to get away. I tried to frighten him; but he would not scare, and watching every motion seemed to defy me to come nearer. A charge of shot quieted him, when I found that he was five feet and seven inches long and as large as a man's arm. Within five rods of this place I killed two more and heard three or four others in the bushes. I began

to think that they were too numerous about there; that I did not care particularly for any more birds that day; so started for the wagon, and drove back to town.

From this day's hunt I made good skins of thirteen Gambel's Partridge, two Chapparral Cock, one Mexican Goshawk, one Long-eared Owl, three Abert's Towhee, one Lucy's Warbler, one Pileolated Warbler, two Orange crowned Warblers, two Gila and one Baird's Woodpecker, three Phainopepla, two Texan Nighthawk, two Crissal Thrasher, three Rough-winged Swallow, and one Plumbeous Gnatcatcher; also the Gila monster. Besides I had several sets of very desirable eggs. Back at four o'clock. A bath is first in order to get off some of the dust and sand; then I measure and tag my specimens, work at skinning till past midnight, and finish the job in the morning.

Such is a partial account of a short collecting trip to this desert valley; and if any reader chooses to try it he may be sure of plenty of specimens, with much to please, interest, and instruct, and so much that is strange, weird, and seemingly unnatural; but the accomodations are sure to be of the poorest, and I fear he may find some things disappointing, unpleasant, and postively annoying.

THE PRAIRIE HORNED LARK.

(*Otocoris alpestris praticola.*)

LYNDS JONES.

More than a year ago* we began to tell the life history of the prairie form of *Otocoris*, promising to complete it another time. The seasons that have intervened have afforded us opportunity for further study, and we feel sure that no one will be the loser from the delay.

The present paper is concerned only with the courtship and nesting habits of these larks, leaving them when the summer moult begins.

Even in January, when the bright, warm sun has eaten holes in Winter's mantle, and the buds on the more for-

* *Semi-Annual*, Vol. II, No. 2, July, 1890, p. 27.

ward trees begin to swell, Otocoris becomes restless. As the warm spring days multiply, his "fancy lightly turns to thoughts of love."

Watch him as he sits on some elevated clod, uttering his peculiar little rattling song, and then darts away like a flash of light, you know not where nor for what. He has not gone far when up starts his intended mate, keeping just out of his reach; now rushing straight ahead, now turning suddenly aside; now up, now down, instantly followed by the ardent suitor. Soon she alights so suddenly that he passes completely over and beyond her, but wheels about and settles, fluttering and singing with all his might, at her side. Coyly she sidles off and feigns indifference, pretending to be feeding. The suitor becomes almost frantic; with drooping wings and elevated head he displays his yellow throat above the black crescent, with comical art, fairly singing his soul away meanwhile.

The object of his affections is still provokingly indifferent. Vexed beyond endurance he springs up and dashes towards her. Away she darts like the wind, just at the moment when you expect a terrible collision! Then the chase begins again. Over and over the ardent suitor and the coy female play their parts, until she finally receives the attentions and caresses which are lavished upon her. Nor does love-making with the larks cease when the prize is won, but continues throughout the spring days, well into the summer months.

Often a second suitor appears upon the scene. Then the courtship just described is multiplied by two! The intervals between the mad chase are filled by challenges and feints of battle. If, after the proper time has passed, the female shows no preference, the issue rests upon a battle between the suitors. It is always short and decisive. The first suitor wins.

Unless the mate of the previous summer has been killed he is always the first and successful suitor. If he does not appear, two young fellows vie with each other for the first position in the affections of the female. If both appear at the

same time she usually shows a preference; but if she does not, a battle decides it. Females of the previous season, only a year old, who have not before had suitors, are often sought by old mates who have lost their mates or been unsuccessful in their love affairs. Usually such females show a preference. In any case a battle is the court of final appeal.

It may be asked if there are not sometimes more females than males. I have always found it to be the other way. If a female loses her mate she at once seeks another and always finds him!

No sooner is courtship over than the business of the household begins. Accompanied by her mate, the female selects a nesting place. Usually a location not many feet from a road or foot-path is chosen. Often, perhaps in the majority of cases, a gently sloping side hill is chosen; but I have found a great many nests on bottom-lands, and a very few on the hill-tops.

The location chosen, both birds set to work to hollow out a little space about three inches deep at the foot of a tuft of grass or some elevation to serve as a slight protection, but not large enough to be conspicuous; rather to divert than to draw attention.

In this slight hollow a scanty supply of fine, dry grass is arranged, the rim of the nest just appearing above the surface of the ground. But the material used is not always grass. If the nest is in a cornfield, the dry husks and leaves of corn are laid next the earth, with a lining of soft corn-silks above.

The general makeup of the nest differs at different times of the year. It is well known that the Horned Larks rear two or even three broods in a season. The first nest, which is made in February or March, would very naturally be more elaborate and warmer, while those made in July would be very slight. A nest is never used twice.

How long does it take a pair of larks to build a nest? That depends upon the weather, whether material is plenty, and whether they are in a hurry to begin house-keeping. A

week is ample time in which to build a nest. I have seen them built in two days. Wet or stormy weather is very unfavorable, since the nest must be on the ground. It is not seldom that a nest is completed some days before any eggs are deposited. And on the other hand, it is not very unusual to find single eggs which have been dropped because no nest was ready to receive them.

In fair weather, as soon as laying begins, an egg is deposited each day ; but if a cold storm should occur before the set is completed, a day or even two, in extreme cases, may intervene between the times of depositing two eggs successively.

Early in the season four eggs make a complete set, though three are often found. Later, when warm weather is coming on, only three, seldom four are laid. Nests in July often contain only two. At any time of year four eggs is the largest number laid.

The eggs are usually elongate ovate in form, sometimes being even a short ovate; and resemble somewhat, in color and markings, eggs of the Brown Thrasher. But there is always a certain difference, difficult to define. In color they are grayish white, never greenish, as is the case with Brown Thrasher not infrequently. The normal egg is spotted and blotched pretty evenly over the entire surface with brown of different shades, giving the impression of heavy markings. Often the markings are so heavy as almost to hide the ground color. In a few instances I have found eggs with a distinct wreath about the larger end, but the remainder of the egg was marked as usual with browns, the wreath being simply confluent blotches and spots.

In size the eggs range from .80 x .60 to .94 x .67. The average egg is .86 x .63.

Setting does not always begin immediately upon the completion of the set of eggs. Frequently, especially in fair warm weather, the birds take a holiday before settling down to real business. The female incubates, being supplied with food by the ever attentive male. After studying

the habits of the larks during this period of incubation, I have arrived at the conclusion that they are more than ordinarily intelligent.

When you approach a nest the male utters his usual call from his watch-tower, giving a peculiar inflection to the last note. He is nowhere near the nest, by the way, and always happens to be in the same direction from the nest that you are. If you are searching for the nest you must now look sharp. As soon as the female hears that note she steps from the nest and walks quietly away, feeding as she goes. You may be on the opposite side hill from the nest when she leaves it; in which case you won't be very likely to find it. But if your eyes are good you may be able to catch sight of the female as she feeds. If you do, sit down and watch her, taking care to remain perfectly motionless. If you wait long enough, and the bird isn't too shy, you may be able to see her return to her nest.

If you should be so fortunate as to flush the bird from the nest, unless you were familiar with the habits of the birds, you would not know it. Casual observers of birds speak in glowing phrases of the art and maternal affection exhibited by the mother bird who leaves the nest fluttering and crying as though injured, trying thus to lead you a way from her nest. But look at this lark. As she suddenly finds you almost upon her she quietly steps from her nest, runs a little way, feeds unconcernedly, and finally flits away easily and calmly as you approach. Which is the more commendable art?

After careful study of a large number of nests, I found that the average period of incubation of our form of the Horned Lark is thirteen days. The conditions may be such that the bird may sit a day or two more or less. I doubt if any eggs are hatched in less than twelve days, and very few in less than thirteen.

The newly hatched young, which break the shell and come forth in exactly the same order that the eggs were laid, are covered with dirty gray down. This thickens as the days pass, and in about ten days the feathers have

well started. The down does not at once disappear, but persists after the feathers are well grown, sticking out between them in little tufts, giving the young bird a very comical appearance. Not longer than fifteen days after hatching, the young leave the nest and begin to "dig" for themselves.

It is exceedingly difficult to trace the life history of the larks after the nest is deserted. All that I have been able to discover is that in a remarkably short time the young become able to catch insects for themselves; when the old birds at once begin building another nest.

Not until late in August, after the birds of the last brood are well grown, is there a time for rest. Then the moult begins, and the birds seem to disappear.

THE AVI-FAUNA OF BROOME COUNTY, N. Y.

BY WILLARD N. CLUTE, BINGHAMPTON, N. Y.

In presenting the following list of the birds of Broome County, N. Y., it may be well to add a few notes on the position and topography of the section under review. Broome is one of the counties forming the "Southern Tier" of the State, and is situated near the centre of this tier. Its southern boundary is the state line—parallel 42°. There are no mountains in the county, the highest points being about 1700 feet above sea-level. It is watered by the Susquehanna and Chenango rivers and several minor streams. As there are no lakes or ponds of any size, we have but few water-birds. The chief waterway of the county—the Susquehanna—which, in part of its course, forms a natural highway for the migratory birds, here flows east and west, and many of the rare migrants have, doubtless, left it for a more direct route northward. The list given herewith is the result of six years' observations and makes no pretentions to completeness. The nomenclature is that of the American Ornithologists' Union. Except in a few instances, I have given the common name by which the bird is best known in the county.

1. **Urinator imber.** LOON.—Occasional migrant.

2. **Merganser serrator.** RED-BREASTED MERGANSER.—Common in spring and fall. Some winter.

3. **Lophodytes cucullatus.** HOODED MERGANSER.—Somewhat rare migrant.

4. **Aix sponsa.** WOOD DUCK.—Not uncommon in spring and fall. A few probably breed.

5. **Branta canadensis.** WILD GOOSE.—Not uncommon migrant. It seldom tarries with us but is often heard flying over at night.

6. **Botaurus lentiginosus.** BITTERN.—Somewhat rare summer resident.

7. **Botaurus exilis.** LEAST BITTERN.—Summer resident. About as common as the preceeding.

8. **Ardea herodias.** GREAT BLUE HERON.—Rare; commonest in spring. As individuals are occasionally seen all summer they doubtless breed sparingly.

9. **Ardea virescens.** GREEN HERON.—Common summer resident: often breeding in communities.

10. **Porzana carolina.** SORA RAIL.—Rare. Probably breeds, as immature birds have been taken in the county.

11. **Philohela minor.** WOOD-COCK.—Not uncommon summer resident.

12. **Actitis macularia.** TIP-UP.—An abundant summer resident.

13. **Ægialitis vocifera.** KILLDEER.—Rare. Occasionally seen in spring.

14. **Colinus virginianus.** QUAIL.—Not very common. Breeds.

15. **Bonasa umbellus.** PARTRIDGE.—Common resident, greatly outnumbering the preceeding species.

16. **Zenaidura macroura.** MOURNING DOVE.—Common summer resident.

17. **Circus hudsonius.** MARSH HAWK.—Not uncommon. Probably breeds.

18. **Accipiter cooperi.** COOPER'S HAWK.—Common summer resident. Breeds.

19. **Buteo borealis.** RED-TAILED HAWK.—Not uncommon. Breeds.

20. **Falco sparverius.** SPARROW HAWK.—Common summer resident.

21. **Pandion haliaetus carolinensis.** OSPREY.—Occasionally seen all summer; may breed.

22. **Nyctala acadica.** SAW-WHET OWL.—Not uncommon resident.

23. **Megascops asio.** SCREECH OWL.—Tolerably common resident.

24. **Bubo virginianus.** GREAT HORNED OWL.—Not uncommon resident.

25. **Nyctea nyctea.** SNOWY OWL.—Occasional winter visitant.

26. **Coccyzus erythrophthalmus.** BLACK-BILLED CUCKOO.—Common summer resident.

27. **Ceryle alcyon.** KINGFISHER.—Common summer resident. Some winter with us.

28. **Dryobates villosus.** HAIRY WOODPECKER.—Tolerably common resident.

29. **Dryobates pubescens.** DOWNY WOODPECKER.—Common resident.

30. **Sphyrapicus varius.** YELLOW-BELLIED WOODPECKER.—Spring and fall migrant. Sometimes abundant, but often not seen during migrations.

31. **Melanerpes erythrocephalus.** RED-HEADED WOODPECKER.—Not uncommon summer resident.

32. **Colaptes auratus.** FLICKER.—Abundant summer resident.

33. **Antrostomus vociferus.** WHIP-POOR-WILL.—Not uncommon summer resident.

34. **Chordeiles virginianus.** NIGHT HAWK.—Common summer resident.

35. **Chætura pelagica.** CHIMNEY SWIFT.—Abundant summer resident.

36. **Trochilus colubris.** RUBY-THROATED HUMMINGBIRD.—Tolerably common summer resident.

37. **Tyrannus tyrannus.** KINGBIRD.—Common summer resident.

38. **Sayornis phœbe.** PEWEE.—Common summer resident.

39. **Contopus virens.** WOOD PEWEE.—Common summer resident.

40. **Empidonax minimus.** LEAST FLYCATCHER.—Tolerably common summer resident.

41. **Otocoris alpestris.** HORNED LARK.—Commonest in spring and fall; many winter with us, and a few are seen in all the summer months; they probably breed.

42. **Cyanocitta cristata.** BLUE JAY. Common resident.

43. **Corvus Americanus.** CROW.—Common resident. The crows winter with us in large numbers.

44. **Dolichonyx oryzivorus.** BOBOLINK.—Common summer resident.

45. **Molothrus ater.** COWBIRD.—Common summer resident.

46. **Agelaius phœniceus.** RED-WINGED BLACKBIRD.—Common summer resident.

47. **Sturnella magna.** MEADOWLARK.—Common summer resident.

48. **Icterus spurius.** ORCHARD ORIOLE.—Rare summer resident. Several nests have been taken.

49. **Icterus galbula.** BALTIMORE ORIOLE.—Common summer resident.

50. **Quiscalus quiscula.** CROW BLACKBIRD.—Common summer resident. Partial to cemetries and groves of coniferous trees near water; seldom found elsewhere.

51. **Carpodacus purpureus.** LINNET.—Common in spring. Some breed, and a few occasionally winter.

52. **Passer domesticus.** ENGLISH SPARROW.—Common nuisance.

53. **Spinus tristis.** GOLDFINCH.—Abundant summer resident. Often seen in winter.

54. **Plectrophenax nivalis.** SNOWFLAKE.—Irregular winter visitant; seen only in the hardest winters.

55. **Poocætes gramineus.** BAYWING.—Abundant summer resident.

56. **Ammodramus sandwichensis savanna.** SAVANNA SPARROW.—Tolerably common summer resident.

57. **Zonotrichia leucophrys.** WHITE-CROWNED SPARROW.—Not uncommon migrant.

58. **Zonotrichia albicollis.** WHITE-THROATED SPARROW.—Abundant migrant.

59. **Spizella monticola.** TREE SPARROW.—Most abundant in spring and fall. Common winter resident.

60. **Spizella socialis.** CHIPPING SPARROW.—Common summer resident.

61. **Spizella pusilla.** FIELD SPARROW.—Common summer resident.

62. **Junco hyemalis.** BLACK SNOWBIRD.—Abundant in spring and fall. Rare breeder: one nest taken July 24, 1890. See *Oologist* for Sept. 1890.

63. **Melospiza fasciata.** SONG SPARROW.—Abundant summer resident.

64. **Melospiza georgiana.** SWAMP SPARROW.—Not uncommon summer resident.

65. **Pipilo erythrophthalmus.** CHEWINK.—Common summer resident. Found in upland slashings, only.

66. **Habia ludoviciana.** ROSE-BREASTED GROSBEAK.—Rare summer resident.

67. **Piranga erythromelas.** SCARLET TANAGER.—Rare summer resident.

68. **Petrochelidon lunifrons.** CLIFF SWALLOW.—Tolerably common summer resident. Restricted to a few favorable localities.

69. **Chelidon erythrogaster.** BARN SWALLOW.—Not uncommon summer resident.

70. **Tachycineta bicolor.** TREE SWALLOW.—Common summer resident. The most abundant of our swallows.

71. **Clivicola riparia.** BANK SWALLOW.—Common summer resident. Restricted to a few localities.

72. **Ampelis cedrorum.** WAXWING.—Common summer resident.

73. **Lanius borealis.** NORTHERN SHRIKE.—Regular winter resident.

74. **Vireo olivaceus.** RED-EYED VIREO.—Common summer resident.

75. **Vireo gilvus.** WARBLING VIREO.—Not uncommon summer resident.

76. **Mniotilta varia.** BLACK AND WHITE CREEPER.—Not uncommon in spring and autumn: has been seen in summer, and may breed.

77. **Compsothlypis americana.** PARULA WARBLER.—Not uncommon migrant.

78. **Dendroica æstiva.** SUMMER YELLOW-BIRD.—Common summer resident.

79. **Dendroica maculosa.** BLACK AND YELLOW WARBLER.—Not uncommon migrant.

80. **Dendroica cærulescens.** BLACK-THROATED BLUE WARBLER.—Common migrant.

81. **Dendroica coronata.** YELLOW-RUMPED WARBLER.—Common migrant.

82. **Dendroica pensylvanica.** CHESTNUT-SIDED WARBLER.—Tolerably common migrant. Sometimes seen in summer.

83. **Dendroica castanea.** BAY-BREASTED WARBLER.—Not uncommon migrant.

84. **Dendroica blackburniæ.** BLACKBURNIAN WARBLER.—Common migrant.

85. **Dendroica virens.** BLACK-THROATED GREEN WARBLER.—Common summer resident.

86. **Seiurus aurocapillus.** GOLDEN-CROWNED THRUSH.—Common summer resident.

87. **Seiurus noveboracensis.** WATER-THRUSH.—Somewhat rare summer resident.

88. **Geothlepis philadelphia.** MOURNING WARBLER.—Not uncommon migrant.

89. **Geothlypis trichas.** MARYLAND YELLOW-THROAT.—Common summer resident.

90. **Icteria virens.** YELLOW-BREASTED CHAT.—Not uncommon summer resident.

91. **Setophaga ruticilla.** AMERICAN REDSTART.—Not uncommon summer resident.

92. **Galeoscoptes carolinensis.** CATBIRD.—Common summer resident.

93. **Harporhynchus rufus.** BROWN THRASHER.—Abundant summer resident.

94. **Troglodytes ædon.** HOUSE WREN.—Tolerably common summer resident.

95. **Troglodytes hiemalis.** WINTER WREN.—Not uncommon winter resident.

96. **Cistothorus palustris.** LONG-BILLED MARSH WREN.—Not uncommon summer resident.

97. **Certhia familiaris americana.** BROWN CREEPER.—Not uncommon resident. Seen oftenest in spring.

98. **Sitta carolinensis.** WHITE-BREASTED NUTHATCH.—Common resident.

99. **Parus atricapillus.** CHICKADEE.—Abundant resident.

100. **Regulus satrapa.** GOLDEN-CROWNED KINGLET.—Abundant migrant. These birds usually winter with us in small numbers, and some are seen in summer.

101. **Regulus calendula.** RUBY-CROWNED KINGLET.—Common migrant.

102. **Turdus mustelinus.** WOOD THRUSH.—Common summer resident.

103. **Turdus fuscescens.** WILSON'S THRUSH.—Abundant summer resident.

104. **Turdus aonalaschkæ pallasii.** HERMIT THRUSH.—Not uncommon during migrations.

105. **Merula migratoria.** ROBIN.—Abundant summer resident.

106. **Sialia sialis.** BLUEBIRD.—Abundant summer resident.

THE MAGPIE IN WASHINGTON.

(*Pica pica hudsonica.*)

W. L. DAWSON.

In his chosen haunts amongst the brown hills of Yakimer County, there is no bird more interesting than the Black-billed Magpie. Like all the other aborigines who will not adapt themselves to the ways of civilization, he has been compelled to seek his home in out of the way places.

During a residence in eastern Washingon of some four seasons, I had ample opportunity to note the habits of this bird, both as it wintered in the valleys, and as it spent the breeding season in the lonesome foot-hills.

Through the short winter it hangs about the farmhouses, with an eye to pilfering from the poultry yard, or else in anxious expectation of its annual festival, "slaughtering time." Necessity alone makes him so bold, for as soon as the warm Chinook winds drive off the snow, early in March, he repairs to the lonesome canons in the foot-hills, and for the rest of the year severs his connection with the busy world.

I made four different visits to their retreats, and each time returned well laden with specimens for the cabinet.

Starting early in the morning, on horseback, a ride of three hours would bring us—for I usually went with a brother collector—over the hills, barren save for sage-brush, bunch-grass, and resin-weed, to one of several "Springs" known to us. The springs themselves were mere excuses for the presence of some scores of willows, quaking asps, and thorn bushes, placed in a deep ravine and somewhat sheltered from the wind by the steep hill-sides. In these trees and bushes the magpies build their nests, at a height varying usually from five to thirty feet, although I have found nests resting on the ground.

A well built magpie's nest is quite an affair; in its normal shape a huge ball of sticks, with the under half shaped and strengthened by a cup of mud a foot across and an inch in thickness; this in turn well dried and carefully lined with roots. The dome is shaped like the bottom, but no mud is used in its construction. The main entrance is through a rather indistinct hole in the side, but as I generally tried to approach the nest from this side, I noticed that the birds often struggled through a less marked opening in the other side. The whole structure averages two or two and a half feet through from top to bottom; but of this there is every variation; in some rare instances the nests had no tops.

Whether or not the birds believe that they can protect their eggs from man, if they only built their nests strong enough, the tendency certainly seems to be toward larger and larger nests. One that I found last spring was a perfect mediæval castle. It was four feet in height by three and a half in breadth, and that, too, making liberal allowance for projecting sticks. It was evidently a new nest and built on the most approved plans of modern magpie architecture. As magpies are most inveterate egg thieves, this huge structure might have been reared with a special view toward securing for its owners a safe retreat from the just indignation of the bird world. In vain were all their precautions, for when I stormed the fortress the bold brigand was obliged to flee, and leave his treasures.

The size of the sticks that they bring to their nests is sur-

prising; some having been found as much as three feet long, and others, shorter ones, as much as three-fourths of an inch in thickness; these last however are rather remarkable exceptions.

The average set of eggs is eight, although nine is not infrequent and one set of ten eggs is recorded. Breeding begins in the latter part of March and is at its height in the middle of April.

Although for the most part the birds keep at a respectful distance, occasionally an over-bold one comes near enough to give you a sound scolding. It is an experience to be remembered, being up in a thorn tree on a windy day, clinging with one hand to a branch, and with the other trying to force an entrance to a magpie's stronghold, while the wind blows the thorns against you, and the magpie, perched just out of reach, gives you a good curtain lecture.

Of the magpie in captivity much has been written, beginning as far back as Plutarch; and small wonder, for surely nothing could succeed better in entertaining than the sly genius and originality of a tame magpie. His well known penchant for hiding bits of meat and chance odds and ends "for future reference" is a constant source of amusement. But he is not to be trusted around the poultry-yard if once he acquires a taste for eggs. I once saw a magpie flying away from a hen coop with a hen's egg in its bill, and I watched it till it lighted several rods away. I immediately frightened it away and the egg was not pierced, broken, or in any way injured, but showed simply the dirty marks of the magpie's bill. The egg was of medium size and certainly made quite a mouthful for such a bird.

Last year, in the latter part of May, I succeeded in capturing a couple of young birds which evidently had quitted the nest several days before. The indignation of the parent birds knew no bounds. I have taken quite a little "sauce" from birds, but I think I never before stood under such a torrent of abuse as those birds heaped upon me when I held up their fledgelings. They could not find ad-

jectives enough in their vocabulary to apply to me, and when strong language failed them, in their impotent fury, they fell to pecking the limbs on which they stood, snapped at and broke off the twigs, and even lit on the ground near me and tore up the earth with their bills, perfectly beside themselves with rage.

Although their range in Washington crowds up to the pine belt, evergreen timber does not seem congenial to them. On this account their presence west of the Cascade mountains has not been recorded, as nearly as I can find out, except in the following instance. On October 7th, 1890, in that time of year when non-migrants have nothing to do but to loaf around and kill time, I met a party of about twenty sight-seeing magpies within a mile of the sea shore and at least a hundred miles west of their usual range.

The magpie is a notable bird; but after all, obscurity is the best passport to long life According to Nicollet magpies were once common in Cook County, Illinois, but now they are rare anywhere east of the Rockies. At this rate one might almost be led to think that they must ere long join the bison. Perhaps, however, when it comes to the test, their native cunning will stand them in hand in the struggle for existence even better than it has with the crow.

REPORT OF THE PRESIDENT FOR THE WORK OF 1891, ON THE FRINGILLIDÆ.

The following report has been compiled from notes received from members of the chapter from several states: Messrs. John A. Donald, Decatur, and Chas. D. Oldright, Austin, Texas; Messrs. F. M. McElfresh, Champaign, and F. A. Gregory, Rockford, Ills.; Messrs. C. P. Howe, Waukesha, J. N. Clark, Meridian, and R. M. Strong, Wauwatosa, Wis.; Mr. D. D. Stone, Lansing, N. Y.; Mr. H. P. T. Weatherr, West Farmington, Maine; Mr. John H. Sage, Portland, Conn.; Mr. J. W. P. Smithwick, Sans Souci, N. C.,

and from my own observations in Iowa and Ohio. To these gentlemen I desire to express my thanks for their interesting and valuable notes.

A number of interesting questions have arisen as we proceeded with the report. Can we not, in our further study, satisfactorily answer them? Our interest grows in proportion to the effort we expend in study and research. Let us increase our interest.

Carpodacus purpureus. Purple Finch.

Mr. D. D. Stone finds this finch a common breeder in Oswego Co., N. Y. He finds the first nest as early as May 8, and the last as late as June 30. The bird builds preferably in fir, spruce, or cedar trees, but he has twice found nests in apple trees. From three to five eggs are laid. They are greenish in color, finely dotted with dark browns and blacks.

Spinus tristis. American Goldfinch.

There seems to be considerable confusion among observers between Goldfinch and Yellow Warbler. Several records are very evidently for those of the Warbler and not of Goldfinch. The Warbler is strictly a migrant, and does not arrive from the South until the first of May, while Goldfinch is a resident nearly throughout the United States. In winter he appears in plain dress and is easily overlooked, especially since his song gives place to a very sparrow-like "chip." The difficulty is aggravated by the fact that Goldfinch dons his yellow and black summer dress about the same time that the Warblers arrive from the South. Bear in mind that the Yellow Warbler nests in May and June, and that Goldfinch waits until July and August. Don't let these two birds give you any more trouble.

Mr. Stone has found nests in New York as early as July 8; and Mr. Strong in Wisconsin as early as June 10. These are exceptional dates. In Iowa I have never found a nest before the middle of July. The last found was September 6, four fresh eggs.

At Lansing, N. Y., fruit trees are preferred as nesting places, the peach being chosen oftenest. In Milwaukee Co.,

Wis., nests may be found in almost any kind of trees or bushes. In Iowa thistles are first choice, then the young sumac, and lastly the topmost branches of young oaks and elms. Thus the height from the ground may vary from one foot to forty or fifty feet.

The material of the nest seems to be very uniform the country through, with unimportant differences for the different localities. Vegetable fibres, shreds of bark of asclepias, rootlets, grasses, fine leaves, horse-hair, wool, thistle-down in nests made late, and other soft cottony materials are woven into a compact, neat nest.

The nest is usually placed in an upright fork, the tough fibres of the outer nest woven about the branches, securely lashing the nest into the fork. In the tops of trees nests are very firmly lashed.

The usual number of eggs is four. But Mr. Stone has found five not uncommonly, and six rarely. I have invariably found four eggs in the nest both early and late.

In color the eggs are uniform bluish-white, rarely with a tint of green, and never spotted.

The eggs hatch in twelve days from the time they are laid, and the young leave the nest in fifteen days. The young appear and leave the nest in exactly the order in which the eggs were laid; one egg being laid each day.

Late one October I found a nest of Goldfinch in the topmost branches of an oak tree in which were the skeletons and quill-feathers of three young birds. The parent birds were probably killed, or the young drowned or chilled in a severe storm.

Why does Goldfinch wait until July and August to rear its brood, when the other birds nest in May and June, months apparently far better suited to brooding? Here is food for thought and opportunity for investigation.

Poœcetes gramineus Vesper Sparrow.

All observers know the Vesper Sparrow, or Grass Finch, or Bay-winged Bunting. It is a common breeder to the North, found only in winter or during the migrations at the South. At Meridian, Wis., Mr. J. N. Clark finds it an

abundant breeder. It is abundant in Milwaukee Co., according to Mr. Strong; "common in western New York." —D. D. Stone; "common in Connecticut."—Sage; and "common in Maine."—Weathern. I have never found it breeding at Grinnell, Iowa; but it is not uncommon at Oberlin, Ohio

It nests early and late. In Wisconsin, according to Clark, Howe, and Strong, nests may be found with fresh eggs from April 20 to July 15; being most numerous in the middle of May.

The nest is always on the ground, usually concealed by a tuft of grass, a bunch of weeds, or a corn-hill. It is composed of fine grass, a few weed-stalks, and leaves, usually lined with hair and rootlets. Old stubble or sod is a favorite nesting place.

The eggs are from three to five in number, of a pale greenish-white color, sometimes grayish or even pinkish, marked more or less heavily with spots, splashes, blotches, and lines of reddish browns, the lines often appearing blackish. Sometimes the whole egg appears washed with this reddish-brown.

In shape the eggs are usually elongate ovate, varying to short ovate. .83 x .61 is an average size, with very considerable variation.

The period of incubation is thirteen days. The young leave the nest in fifteen to seventeen days.

Ammodramus sandwichensis savanna. Savanna Sparrow.

The range of this sparrow is nearly the same as that of the Vesper Sparrow, but the bird is not so well known. Only Mr. Clark has found it in Wisconsin as a breeder. Mr. Stone finds it common all summer in New York, and Mr. Sage says that it is common in Connecticut. In Iowa it is common in the fields; but I have not met with it in Ohio; it certainly is not common in Lorain County.

Like the last, its nest is placed on the ground, usually beneath a tuft of grass or other shelter; meadow is a favorite nesting place. It is sunken flush with the surface and is rather loosely made of fine dry grasses. I have usually

found nests in rather low places, seldom on uplands.

Mr Stone finds nests most common about May 15. I have found them as early as May 1, and as late as June 15. Mr. Stone records a nest with five eggs June 6. Early nests may contain six eggs, usually five, and late only three. The average set is five. The eggs are a greenish- or grayish-white, very finely marked with spots and dots and small blotches of light brown and lilac, forming a ring about the larger end or becoming almost confluent in a great blotch covering it all over. Incubation lasts twelve days, and the young leave the nest in about fifteen days.

Ammodramus savannarum passerinus. Grasshopper Sparrow.

Although pretty generally distributed over the Eastern United States, the Grasshopper Sparrow does not seem to have been very widely noticed. There are only the records of Mr. Sage for Connecticut, and my own for Iowa. Mr. L. M. McCormick secured three specimens on the Vermillion river bottoms during the season; they were evidently breeding. Mr. Sage calls it "a rare S. R." in Connecticut. He has found two nests. One, June 1, five eggs, the young well developed. Nest in an open, dry field, and not protected by a tuft of grass or weeds. The other, June 6, four eggs. Nest in a mowing lot, on high ground. In Iowa, *passerinus* is one of our commonest sparrows. Nest building begins the second week in May, and fresh eggs are frequently found in July. First sets sometimes contain six eggs. July sets almost invariably only three. Five is the normal number. It is very common to find single eggs of *passerinus* lying upon the bare ground.

The nest is made in a slight depression made by the birds, usually beneath a tuft of grass or weeds. It is composed almost wholly of fine, dry grass, seldom lined with a few hairs. Early in the season it is frequently arched over, and is very pretty. Later it is a plain, flat nest.

The majority of nests are in lowlands, *not* wet lands, or on side hills sloping to depressions. A very small percentage are on the hill-tops. The bird flushes finely from the

nest, always betraying its position. Sometimes she will sit until one is almost past or upon her before flushing.

There is little danger of mistaking this bird's eggs for those of any other. They do not resemble eggs of any other sparrow in shape or general appearance. Most eggs are short ovate, appearing plump and full at the larger end. They are of a pure white color, slightly polished, and rather sparingly spotted, dotted, and sparingly blotched with reddish browns, mostly around the larger end, often in the form of a ring. The markings are never so heavy that the ground color cannot be easily seen.

The period of incubation is twelve days, and the young leave the nest in fifteen days. When hatched they are covered with dirty looking down. For a fuller account of this bird's habits, see O. & O. S. A. Vol. I, No. 2.

Ammodramus henslowii. Henslow's Sparrow.

No one seems to have noticed this bird except myself. Even the books find little to say of it. In Iowa it is common in the fields. The first arrivals from the South are always found in the underbrush skirting native woods. Later they move out to their prairie homes, just as the Grasshopper Sparrows are arriving from the South. Their weak little voice will not be heard among all the rest unless one listens very attentively for it.

Soon after its appearance on the prairies nest building begins, about the middle of May. I found a nest with eggs nearly fresh May 25. So few have been found that no exact dates can be given. From unmistakable indications we would be safe in saying that nests with eggs may be found as late as July 10.

The nest is placed on the ground, usually in a slight depression, and has for a shelter a tuft of grass or bunch of weeds. The material is fine dry grass, with a few hairs frequently. The use of feathers is accidental, as they are evidently from the mother bird's breast, and are not built into the material of the nest.

The eggs resemble those of the last species, but usually have a greenish or grayish tint with brown markings not

so large. The average size is .75 x .57, thus being rather smaller than those of *passerinus*.

Chondestes grammacus Lark Sparrow.

In the preliminary report on the sparrows I mentioned this bird as not common in Oberlin. I have since learned that it had not thus far been taken in Lorain County, but that it had been found within the state.* Its home is the Mississippi Valley, from which there are some very full notes.

It is interesting to note how different the nesting habits of these birds are as we pass from south and west to north and east. Messrs. John A. Donald of Decatur, and Charles D. Oldright of Austin, Texas, have sent in very full notes, so that we are able to make a careful comparison. Mr. Oldright says, "nests are sometimes on the ground sunk to its level, and concealed in a tuft of muslin weed or other plants; but this is not so frequent in Travis County as in less wooded localities. Here nests are found in bushes and trees, usually not less than six feet high, and sometimes as elevated as thirty feet. Of the twenty-eight nests by Mr. Donald twelve were on the ground in the open prairie or field, fifteen in trees or brush or vines, while one was on top of a post under a cotton platform. Of the twenty-eight nests, sixteen were in the prairie, seven in the timber belt, five in the city of Decatur, one nest was in an elm tree, fifteen feet up, overhanging a road. Three were within a few feet of public roads, three were placed in door yards. The average of those placed above ground was seven feet. In Iowa nests are invariably on the ground, sunk flush with the surface, sometimes concealed in a tuft of grass or bunch of weeds; often in the open with no attempt at concealment.

The fields of fall-plowing are favorite resorts early in the season. I have very frequently found nests early in May, as the ground was being worked the first time. After the corn is well grown, late in June or early in July, nests are

*On May 20, 1892, Mr. L. M. McCormick took several specimens on the Vermilion River bottoms.

placed at the foot of a corn-hill. All of the nests that I have found have been in fields or meadows.

In Wisconsin Messrs. Strong and Clark find nests always on the ground, sunken to its level, in pastures or fields. Thus the habit of building above the ground is peculiar to the south and west. The difference is not due to a greater scarcity of timber at the north and east, for there is fully as large a proportion of timber to prairie there as in Texas. Let some one study out the reason.

Mr. Donald describes a typical nest as, "tolerably bulky, composed mostly of muslin weeds, with a little grass; lined first with rootlets, then with horse-hair." He has found but three nests which did not contain muslin weed. Two of these were composed of grass and weeds, and lined with rootlets; while the other was on the ground and composed wholly of grass. "The soft, cottony muslin weed seems to be a characteristic of this species." Mr. Oldright describes the nest as composed of about the same material, but does not consider it bulky, but rather compact. He finds that those made on the ground are much slighter and looser. Mr. Donald finds that during the early part of the season nests are almost invariably in trees or bushes, while in June they are mostly on the ground. A point well worth noting.

In Iowa and Wisconsin the nests are made of weed stems, dry grass, and rootlets; always with a preponderance of rootlets. The nests are not compactly built, but strong enough so that they can be easily preserved. Often no other material than rootlets is used.

In Texas the birds rear two broods. The season extends from April 15 to June 22. Mr. Donald's earliest nest was April 18; Mr. Oldright's latest June 15. In Iowa and Wisconsin two broods are raised; the first nest May 1, the last July 10. Thus at the south the birds are more forward in spring.

The average set in Texas contains four eggs. Of twenty-seven sets found by Mr. Donald eleven contained five eggs, thirteen four, and three three; all known to be com-

plete sets. Mr. Oldright says, three, four, and five constitute a set.

In Iowa I have never found more than four. But in Wisconsin Mr. Clark has found five in a nest.

A series of eggs collected by Mr. Donald show an average of .79 x .61. The largest is .86 x .64, the smallest .62 x .50 which is evidently a runt. The next smallest is .75 x .58. Sets taken in central Iowa show an average .76 x.54. Thus Iowa eggs are more spherical and smaller. In shape they are short ovate

The ground color is pearly white marked with a few pin points of black to heavy smudges of red umber. The scratchy, wavy lines are generally characteristic, according to Oldright. Iowa eggs are much the same. The markings are usually confined to the large end, and never heavy enough to obscure the ground color. The blotches, scratchings, and pencilings are usually clove brown, with blotches of lavender appearing as shell markings.

The period of incubation is twelve days, and the young leave the nest in fifteen or sixteen days

Spizella socialis Chipping Sparrow.

This bird is almost too well known to require consideration here. But it may be interesting to compare dates of nesting in the different localities. Chippy does not breed in Texas. But in North Carolina Mr. Smithwick says that the first nest is made the first of May, and the last to be found the last of June. In New York, according to Stone, the first nest is made May 10. In Iowa the first nest found was May 1, the last June 10. In Wisconsin Clark found the first nest May 15, Strong first week in May. The last one found by Mr. Howe was June 20. In Maine Mr. H. P. T. Weathern says that Chippy does not begin to build till late in May. Nests may be found as late as July 1. Thus the southern birds are several weeks earlier than the northern.

Chippy builds his nest above ground, rarely as high as thirty feet, usually about six, in trees, bushes, shrubs, and vines. Mr. Strong says that the nest is sometimes placed

on beams of buildings. I have found more nests in ornamental shade and garden trees than anwyhere else. The social habits of this sparrow lead it to appropriate the artificial shrubbery in lawns and nesting sites. It is very interesting to note with what regularity and precision birds will return to their old nesting tree or shrub and build a gain their new home within it.

The nest is made of much the same material the country through It gives the impression of being rather frail, with only dry grass and a lining of long hairs; but in fact the nest is quite durable and compact. Often nests are wholly made of hair. And it is worth noticing that the long hairs from a cow's tail are more commonly used than horse-hair.

Chippy lays four eggs usually, rarely five, late in the season only three. It is one of the birds most imposed upon by the Cowbird. I have several times found three eggs of Cowbird in one nest with only two Chippies' eggs.

The eggs are a uniform greenish blue or bluish green, sparingly speckled and spotted with blackish brown and purplish, chiefly around the larger end. Mr. E. B. Peck gives the average measurements as .69 x .50, which is the average for Iowa.

Mr Clark says that the period of incubation is thirteen days, and that the young leave the nest in ten days. We might expect a period of only twelve days with so small a bird.

Spizella pusilla. Field Sparrow.

The breeding range of Field Sparrow seems to be farther south than that of Chippy. Mr. Oldright finds it a common breeder in Travis County, Texas, while Chippy was only a winter visitor there. The notes represent it as occurring in every locality as a breeder.

In Texas it begins to breed April 15, and continues till May 15. In North Carolina the first nest may be found the first week in May, and the last one the last week in June. In Iowa the first nest is May 10, the last July 10. In Wisconsin the first is a little later—May 20, the last June 28. In

New York Stone records the first nest May 1. In Connecticut Mr. Sage gives the first nest May 19.

In Texas, North Carolina, New York, and Iowa, nests are above ground at all seasons, either in grass, weeds, bushes, or trees, usually not more than two feet, often only a few inches; Mr. Smithwick records one nest in a cedar, thirty feet up; this is very unusual. In Wisconsin all three observers say that the first nest is placed on the ground, later ones in grass or bushes. Mr. Sage says that nests are usually on the ground, sometimes in bushes. There seems to be a tendency for the birds to seek the ground at the north and shun it at the south. Can weather be the cause?

In any situation the nest is made of about the same materials, in the same manner. Small weed stems, dry grass, and long hairs from a cow's tail are the regulation materials, all woven into a neat nest. Often a few leaves may be used. But downy and cottony substances are avoided. The location chosen is usually in the vicinity of a woods, in the brush and shrubs skirting it. Mr. Oldright finds that in Travis County, Texas, this sparrow is confined to one small tract near Austin.

Field Sparrow lays from four to six eggs, average five, according to Clark; three to five, average four, Strong; four average, Howe; three to six, average five, in Iowa; three or four, average four, in Texas, Oldright; two to four, average three, in North Carolina, Smithwick; three to four, average four, New York, Stone; three to five, average four, Peck; three to five, average four, in Connecticut, Sage. Cowbird frequently inposes upon this sparrow. Two broods are raised in most localities.

In color the eggs are buffy, clay, or often greenish, white, rather thickly spotted, blotched, and washed, with several light shades of brown, and lavender; the markings being more pronounced and thicker at the larger end, sometimes, becoming confluent so as to hide the ground color. The eggs are rather elongate, oval, or ovate, in form. They

vary from .62 to .72 in length by 50 to .55 in breadth. The average is about .68 x .53.

The period of incubation is twelve days, and the young leave the nest in twelve or thirteen days.

Melospiza fasciata. Song Sparrow.

The range of Song Sparrow seems to correspond very nearly to that of Chippy. It is not found breeding in either Texas or North Carolina. Even in Iowa it is not common in summer in the central portion. In Wisconsin, Iowa, New York, Connecticut and Maine, it is common all summer. In Wisconsin Mr. Clark found the first nest May 12, last July 12; Howe May 17, first; Strong May 3, first, eggs slightly incubated last week of July, the last. In Ohio May 10 is the first date. In New York, April 22, Stone. In Connecticut, May 17, last June 16, Sage. In Maine, May 20, Weathern.

Song Sparrow builds its nest either on the ground or in trees or low bushes Mr. Weathern has found nests "in a hollow place in a tree, four feet up." Mr. Clark says, "the first nest is on the ground, the second in willows." Strong finds some in brush piles and weeds. In Ohio I have found them only on the ground, and in Connecticut Mr. Sage finds them only on the ground. They are seldom many feet above ground in any locality.

The nest is made of weed stems, leaves, grass, and lined with fine grasses and hair. The nest is not very compactly made; the outer layer of leaves and weed stems falling off.

The eggs range from three to six in a set, usually five. They vary so greatly in coloration that only a general idea can be given of the general appearance. Some are pinkish white, running through, greenish white to light bluish green. The coloring is usually in rather heavy blotches, with a few spots and splashes of several shades of dark brown, all so heavy that the ground color is obscured or hidden.

In size they average .73 x .57, varying a few hundredths each way. Thus they are ovate in shape, almost oval.

The period of incubation is thirteen days. I have never been able to study carefully the full history of Song Sparrow.

Melospiza georgiana. Swamp Sparrow.

The range of Swamp Sparrow is rather more northerly than that of the last. It does not occur in Texas and North Carolina as a breeder, nor in central Iowa. I have not found it at Oberlin, Ohio, though I presume it may be found in the swamps on the lake shore. In Wisconsin it is common in summer, according to Clark; and abundant according to Strong. There it begins to build the last week in April, and eggs may be found as late as the first of August. In New York the first nest was May 2. Mr. Sage records no nest from Connecticut, and the bird is unknown to Maine observers.

As its name suggests, it is preeminently a bird of the swamps and lowlands, building its nest on the ground, among the rushes and sedges which abound where water stands. The nest is made of rushes, dry grass, and hair, after the pattern of Song Sparrow; and its eggs so nearly resemble those of that species that it is often difficult to distinguish between them; they are, however, usually more clouded, and the marking more indistinct. In size they average .76 x .59, thus being larger than eggs of the last species. The number of eggs in a set ranges from three to five; usually four.

The period of incubation is thirteen days.

Pipilo erythrophthalmus. Chewink, Towhee.

Towhee is not known south as a breeder. Messrs. Clark, Howe, and Strong find it common in Wisconsin. In Iowa and Ohio it is very common. It is fond of woods in which underbrush is rank, and in little copses of brush. A brush grown clearing is a favorite resort.

Building begins May 1 in Iowa and Ohio. This spring I found a nest containing three of Chewink and two of Cowbird, May 7. The eggs were addled. In Wisconsin nesting begins a week later than in Iowa. July 1 is a rather extreme date for fresh eggs.

The nest is placed on the ground preferably at the foot of a bunch of brush or weeds, or at the foot of a tree against which leaves have drifted. I have found a few out in

an open orchard, on the ground, and a few four to six feet up in bushes.

Nests are made largely of dry leaves, with a lining of dry grass, with a few hairs and feathers occasionally. The few nests in bushes had a foundation of small twigs.

The average set contains four eggs, often three: rarely five complete a set. Mr. Strong records a nest found May 28, '88, which contained one normal egg of Towhee and one runt, with four of Cowbird! I have often found two and three eggs of Cowbird in Towhee's nest.

The eggs are usually whitish, sometimes pinkish or bluish in color, profusely and quite evenly spotted, blotched, and splashed, over the entire surface, with browns of a pinkish shade. Often the markings are so heavy that they obscure the ground color, making the egg have a pinkish appearance. In size the eggs average .96 x .72.

Cardinalis cardinalis. Cardinal Grosbeak.

This is a southern bird, not reaching central Iowa, but found in Ohio rather commonly as a resident. We are indebted to Messrs. Donald and Oldright for our notes, as I have never taken a nest in Ohio.

In Texas nest building begins about April 1. Mr. Donald records the first April 8, one egg; but a nest containing four young April 20. His latest is June 30, incubation slight. He says two broods are raised.

The birds place their nest in trees or bushes, usually trees. Of fourteen nests found by Mr. Donald seven were in oak uplands, six along prairie branches of streams, and one in the city in a honeysuckle vine covering a summer house. The highest was eight feet, lowest two, average five. He says, "Cardinal, as a rule, builds his nest in some bushy tree or bush, generally concealed, though I have found them in public places."

"A typical nest is bulky. First, a large network of small briars and other twigs; second, the nest proper, composed of the inner bark of grape vine, leaves and grass, and root lets; the grape vine bark being characteristic. The nests are usually well built, but sometimes frail."

Of twenty-one sets examined one contained five eggs, twelve four, eight three. Mr. Oldright records one set of five, and several taken by Mr. N. Y. Benedict in Young County, first nests four, later three. A series of eggs shows an average of .93 x .69, the largest 1.05 x .68, smallest .75 x .59, probably a runt.

The ground color of eggs varies from a white, to a greenish or bluish, even to a brown tint. The markings are reddish brown, lavender, and lilac, often pretty evenly distributed over the entire surface, sometimes confined to the larger end, there becoming confluent in a blotch.

Habia ludoviciana. Rose-breasted Grosbeak.

This is another northern species, breeding commonly in Iowa and Wisconsin, not so commonly in Ohio. Messrs. Clark and Strong list it as abundant in Wisconsin all summer.

Nesting begins about May 20. Clark gives the first nest May 24, Strong May 20, last July 9. Of the position of the nest, Clark says, "Nest in upright fork of slender sapling." Strong says, "Nests placed from eight to twenty feet up in crotches of small trees and forks of limbs of larger trees." I have found many nests in grape vine thickets and on horizontal branches like nests of Scarlet Tanager.

Strong says of the composition of the nest, "Nests are made of small sticks, twigs, weed stems, straw, dried grass, etc Most of the materials used are too stiff and brittle to be bent, so the ends of the twigs are left sticking out at all angles." Iowa nests are made of light colored material, often of a small vine woven neatly and compactly. A few grass and weed stems are often used, but no twigs are ever seen. The whole structure is so thin that the eggs can be seen from beneath. There is no attempt at fixing the nest in its position, so it is frequently tipped over or tilted.

A nest complement is three to five, usually four eggs. The eggs are a greenish blue or bluish green, more or less spotted and blotched over the entire surface with reddish brown and lilac shell markings. The markings seldom be-

come confluent. The average measurements are .98 x .73 ; largest, 1.05 x .71 : smallest .92 x .62.—Strong.

Passerina cyanea. Indigo Bunting.

The notes relating to this bird are very scanty. Mr. Oldright says that it breeds rarely in Texas, and Messrs. Clark and Strong find it tolerably common all summer in Wisconsin. It is common in Iowa, less so in Ohio. In Iowa it begins to build about June 1. The first nest with eggs was found June 6, the last July 10.

The nest is placed in low bushes or bunches of weeds or grass from three inches to four feet up. It is made of weed stalks, coarse grass, and leaves, lined with finer grass. The weed stalks and leaves form a deep foundation, and the other material is placed upon it.

The average set is four eggs, late in the season only three. The eggs are whitish with a bluish tinge, often quite blue, often almost cream white, and are very rarely spotted with brown. They measure .75 x .52. Period of incubation twelve days.

Passerina ciris. Painted Bunting, Nonpareil.

The Nonpariel is a bird of the South, being found only by Texas observers, where it is common. Mr. Oldright found the first nest May 15 ; Mr. Donald the last June 22.

The nest is placed in a small bush about three feet up, and resembles that of Field Sparrow, Mr. Oldright says. "It is composed of large white lichens and heads of a small plantain fastened together with spider-webs on the outside, grass on the inside, and lined with rootlets "—Donald.

Four eggs make a set. They are white or bluish white, speckled, spotted, and blotched with brown, chiefly at the large end. Four sets collected by Mr. Donald average .67 x .50.

Spiza americana. Dickcissel.

Better known as Black-throated Bunting. It has an extended range north and south, breeding from Texas to Minnesota. I have never found it in Ohio.* Mr. Strong

*Since the above was written Mr. L. M. McCormick has found it breeding on the Vermilion River.

record s one from Wisconsin. (WILSON QUARTERLY, Vol. iv. No. 1, page 34.) Both Texas observers find it abundant. In Iowa it is the most abundant bird.

Mr. Oldright found the first nest May 1. Donald May 20, incubation advanced. In Iowa the first nest May 15; the last August 10. Two broods are raised.

Mr. Donald has never found a nest on the ground, all being in grass, weeds, or bushes, from two or three inches to three feet up. Mr. Oldright says that nests are either on the ground or in bushes up to ten feet above ground. I have found but few nests on the ground; one was in an apple tree, twenty feet up. Usually nests are in low bushes, weeds, or grass, in copses, or neglected fields.

Nests made early in the season are composed of leaves, grass, and weed stalks, lined with fine grass, sometimes with a few rootlets and hair. Later nests, those made in July, are almost wholly made of the dead stalks of the Shepherd's Purse; looking much like nests of Rose-breasted Grosbeak

The eggs are four to six, commonly five, in number, in Iowa, four in Texas. In color they very closely resemble eggs of Bluebird, being light blue unspotted.

Texas eggs average .82 x .61, with a variation of .06 x .04.

In Iowa eggs average .81 x .60. Incubation is completed in thirteen days.

Guiraca cærulea. Blue Grosbeak.

Both Texas observers have found this Grosbeak rare in Texas. Mr. Donald has collected two sets of eggs. One was found June 4, the other May 25.

One was in a Black Jack bush, in the edge of a cotton field, three feet up; it contained four eggs. The other was in the same kind of a bush in the timber in oak uplands, two feet up; it contained two eggs. Both were three miles from Decatur.

The nests were made of weeds, grass, leaves, corn husks, and paper fastened together with spider-webs, and lined with fine rootlets and horse-hair.

In size the eggs average .88 x .63; smallest, .87 x .62; largest, .91 x .64. They are plain, light blue, rarely spotted with lilac shades.

The following are a few species which have been found breeding by one or two observers. No comparison can be made, as there are not notes enough from different sources.

Spinus psaltria mexicanus. Mexican Goldfinch.

Mr. Oldright reports it as a rare breeder at Austin, Texas; he has never found a nest. At Mason, Rev. Ira B. Henry has found it common. (*Mississippi Valley Bird Migration*, page 183.)

Zonotrichia albicollis. Peabody, White-throated Sparrow.

Mr. Stone mentions a set of four taken by Mr. E. S. Bryant, at Phœnix, N. Y.

Zonotrichia leucophrys. White-crowned Sparrow

Mr Weathern reports this sparrow as common in Maine, breeding in swamps and thickets.

Amphispiza bilineata. Black-throated Sparrow.

According to Oldright it is rare in Texas as a summer resident.

Peucæa cassini. Cassin's Sparrow.

"In Texas it is common in summer, resorting to mesquite thickets."—Oldright.

We have seen that Lark Sparrow nests in bushes and trees at the south and west, but on the ground at the north and east; that not a few of the sparrows which make two broods build the two nests in different positions or of different material. The fact has been discovered before, but the why has never been found out. Let us make this our work. Only the surface of ornithology has yet been scratched: we must dig deep into it and find there the hidden treasures.

LYNDS JONES.

NOTES.

BLUE EGGS OF THE CROW.

BY W. L. DAWSON, OBERLIN, O.

One day last April, on my return from a trip after crow's eggs, I showed my finds, two sets having the ordinary olive-green and spotted coloration, to a friend of mine. He exclaimed in great surprise: "Why, I thought crows' eggs were light blue; those that I have seen were." In my supreme oological conceit I chaffed him unmercifully for making such a wild statement; but I only succeeded in arousing his Canadian blood, and he stuck to it most positively that he had seen blue crow's eggs in Ontario, and that he had watched them till young crows had been hatched from them.

A few days later, April 30th it was, I started out with my climbers and gun, and was accompanied by a fellow student of marked botanical instincts.

In the course of the afternoon we came to a crow's nest placed about fifty feet high in a beech tree; and the first thing that attracted my notice as we approached, was the head of the crow as she peered anxiously over the edge of the nest. I walked slowly past the tree so as to size it up from another side; and not till then did I point out the bird's head to my companion. At the sight of my threatening finger, knowing that she was detected, the old crow flew off with loud "caws". I soon had on my climbers and made the ascent. Judge of my feelings when I peered into the nest and beheld, not the set of conventional crows' eggs, but a single pale blue one. I grasped the egg, still warm, and hastened down. Nothing but the possession of such a treasure would have made up for my humiliation at the "I told you so" of my Canadian friend, delivered with a very self satisfied chuckle.

Nine days later I revisited the nest, this time taking

great pains in my approach, meaning to secure a shot if possible. It was no use; the male discovered me and set up an outcry, and the female was off like a flash. Both birds were well seen however, and their continuous clamor in an adjacent part of the woods assured me of their interest if not of their sympathies. I ascended the tree with some trepidation, fearing lest the old bird should have gone back on her reputation as a freak. But I was not to be disappointed; there lay three eggs as destitute of markings as any woodpecker's, and having the same delicate blue tint as my first one. The nest was in every respect a crow's, though indifferently well lined. Although unable to secure the parent birds on account of their extreme wariness, I am thoroughly satisfied that the evidence for these *crows' eggs* is the best.

The eggs measure as follows: 1.83 x 1.41 inches; 1.82 x 1.38 inches; 1.78 x 1.39 inches; 1.72 x 1.39 inches; as compared to 1.70 x 1.20 for the average crow's egg.

—x—

On the 28th of May, 1892, while out collecting, I shot a male Olive-sided Flycatcher. This bird had a shining white brown; the bill, which was slightly larger than ordinary, was flesh colored with the exception of a black spot on the upper mandible. The back was spotted here and there with white feathers. WM. ROLFE.

[A case of partial albinism.—ED.]

—x—

While exploring a deep, thickly wooded ravine leading into Vermilion River, Lorain County, Ohio, with a party of botanists, June 4, 1892, the publisher found a nest which he had sought without success for some years.

Following the bed of the clear, cold stream at the bottom of the ravine, we flushed a bird from its nest in the side of a clay bank. The bird flew quickly away, "chipping" sharply, and giving us little chance for observation.

A few minutes later, on the return back to the river we obtained an excellent view of the bird and easily recognized it as the Oven Bird, *Seiurus aurocapillus*.

The nest was placed in a little hollow, in a recess of the

bank, with the sod at the top overhanging it a few inches above. It was not roofed over, and contained the exceptional number of six eggs of the usual color and size; incubation well advanced. The nest was made of dry rootlets, grass, and leaves, with finer rootlets and grasses for the lining.

When we were within four or five feet of the nest, the bird left it, and joining its mate, flew nervously about at a distance, uttering quick, sharp notes of alarm.

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EDITORIAL.

In working over notes for the purpose of making a general report, the first great difficulty to a comprehensive view of any one species is in the lack of notes from widely different localities An ideal report would have for its ba-

sis not only these widely different localities, but all intervening places as well. With our limited numbers we cannot hope for more than an approximation to this. But we have members in Maine and in California, in Minnesota and in Florida, with many between. The difficulty, then, is not in the places which ought to be represented, but in those who should represent them. Not enough members attend to making their reports.

The coming report on the Owls is already fuller than the present one on the Sparrows, but there are still some serious gaps. Thus far nothing but the bare lists are in. Before the first of September, certainly not later than the 15th of that month, all notes should be sent to the President. We want every note that you have. Study the scheme in the last QUARTERLY, and make your report carefully. Omit nothing because you regard it of no interest. We want it!

Measurements of eggs and of birds are particularly desired. The phases of plumage will furnish material for a very interesting portion of the report.

Lose no time in getting your notes together.

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Since our last issue two new active, and two new associate members have joined us, with others likely to do so at an early date. We still have room for those who wish to aid in the work which we are trying to do.

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What shall we study next year? Now is the time to be thinking about it. Before October we should have our plans well matured so that they can be put into definite shape in the next issue, and in the January issue fully worked out. It is a matter in which we are all interested. If any one has a new plan of work let him propose it so that we can have it under advisement.

Not as many notes have been sent in as we hoped. The pages of the paper ought to fairly glow with the freshness of the fields. We all see very unusual things which would be of great interest to all. Write them up briefly and send them in. Notice in this issue what has been discovered by members. You can do as well.

PUBLICATIONS RECEIVED.

The Observer. Vol. III., Nos. 5, 6, 7. Published by S. F. Bigelow, Portland, Conn. A monthly of pages, 11 x 15 in., full of valuable matter to all lovers of nature.

The Taxidermist. Vol. I., Nos. 10, 11, 1892. A twenty page monthly at 50c a year. Published by C. F. Mignin, edited by E. W. Martin, Akron, Ohio. Contains many good articles on general ornithology, and excellent hints to taxidermists by men eminent in the profession.

Ornithologist and Oologist. Vol. XVII., Nos. 4, 5. Published at $1.00 a year by F. B. Webster Co., Hyde Park, Mass. Always full of valuable matter and fresh notes.

California Traveler and Naturalist. Vol. I., Nos. 3, 4, 5. Published by N. L. Hertz & Co., Napa, Cal., at 35c a year, with premiums. It is bound to succeed.

Sports Afield. Vol. IX., No. 1. $2.00 a year. Published by Claude King, Denver, Col. A 100 page monthly, invaluable to sportsmen, containing many fine articles on general science.

Descriptive List of Fishes of Lorain Co., Ohio. By Lewis M. McCormick. Contains a systematic table of 24 families, followed by short, comprehensive descriptions of 89 species found in Lorain Co.; 14 plates add value to the work. A carefully made map of the county is a very valuable aid in locating the places mentioned in the text from which certain species were collected. It is a contribution to the ichthyological literature of Ohio.

PUBLISHER'S PAGE.

The publisher will be at North Greenfield, Wisconsin until September 20; after that date at Oberlin, Ohio, as formerly.

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